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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/520,339	01/04/2005	Peter Albert Cirkel	NL02 0620 US	2598

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PHILIPS ELECTRONICS NORTH AMERICA CORPORATION
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EXAMINER

BRIGGS, NATHANAEL R

ART UNIT	PAPER NUMBER
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2871

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/21/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/520,339

Applicant(s)

CIRKEL ET AL.

Examiner

Nathanael R. Briggs

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-24 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 1-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Hiji et al. (US 6,580,482).**

4. Regarding claim 1, Hiji discloses an apparatus (see figures 1 and 3, for instance) comprising: a first liquid crystal cell (51), said first liquid crystal cell (51) comprising a plurality of first pixel elements (22) configured to produce images, said first pixel elements (22) being controllable between a non-reflective state, in which electromagnetic radiation having a first polarization is reflected to a first extent, and a reflective state, in which said electromagnetic radiation having a first polarization is reflected to a second extent (column 11, lines 2-16), said second extent being greater than said first extent; and a second liquid crystal cell (53), superimposed on the first liquid crystal cell (51), said second liquid crystal cell (53) comprising a plurality of

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second pixel (24) elements configured to produce images, said second pixel elements being controllable between a non-reflective state, in which electromagnetic radiation having a second polarization is reflected to a third extent, and a reflective state, in which said electromagnetic radiation having a second polarization is reflected to a fourth extent (column 11, lines 2-16), said fourth extent being greater than said third extent, characterized in that said first (51) and second (53) liquid crystal cells are configured so that said first polarization (left-handed) is different from said second polarization (right-handed). Claim 1 is therefore unpatentable.

5. Regarding claim 2, Hiji discloses an apparatus according to claim 1 (see figures 1 and 3, for instance), wherein the electromagnetic radiation has a wavelength of between 300 nm and 800 nm (red, green, blue; column 7, lines 36-38). Claim 2 is therefore unpatentable.

6. Regarding claim 3, Hiji discloses an apparatus according to claim 1 (see figures 1 and 3, for instance), wherein said first polarization and said second polarization are circular polarizations of opposite handedness (left-handed, right-handed). Claim 3 is therefore unpatentable.

7. Regarding claim 4, Hiji discloses an apparatus according to claim 1 (see figures 1 and 3, for instance), wherein said first (51) and second (53) liquid crystal cells are configured so that said first polarization (left-handed) is different from said second polarization (right-handed) via a polarization-altering element (45) arranged between said first (51) and second (53) liquid crystal cells. Claim 4 is therefore unpatentable.

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8. Regarding claim 5, Hiji discloses an apparatus according to claim 4 (see figures 1 and 3, for instance), wherein said polarization-altering element (45) is a halfwave plate (column 13, line 16). Claim 5 is therefore unpatentable.

9. Regarding claim 6, Hiji discloses an apparatus according to claim 1 (see figures 1 and 3, for instance), wherein said first (51) and second (53) liquid crystal cells are configured so that said first polarization (left-handed) is different from said second polarization (right-handed) via at least one lens (45) arranged between said first (51) and second (53) liquid crystal cells. Claim 6 is therefore unpatentable.

10. Regarding claim 7, Hiji discloses an apparatus according to claim 1 (see figures 1 and 3, for instance), wherein said first (51) and second (53) liquid crystal cells are disposed a certain distance from each other such that light can be reflected at different angles from the first (51) and second (53) liquid crystal cells. Claim 7 is therefore unpatentable.

11. Regarding claim 8, Hiji discloses an apparatus according to claim 6 (see figures 1 and 3, for instance), further wherein said first (51) and second (53) liquid crystal cells are arranged to transmit a first and a second image, respectively, to the first and the second eye of an observer. Claim 8 is therefore unpatentable.

12. Regarding claim 9, Hiji discloses an apparatus according to claim 1 (see figures 1 and 3, for instance), said first (51) and second (53) liquid crystal cells, wherein said first and second electromagnetic radiation have different wavelengths (green, blue). Claim 9 is therefore unpatentable.

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13. Regarding claim 10, Hiji discloses an apparatus according to claim 1 (see figures 1 and 3, for instance), said first (51) and second (53) liquid crystal cells, wherein at least one of said first (51) and second (53) cells is at least partially made of cholesteric texture liquid crystal (column 11, lines 2-16). Claim 10 is therefore unpatentable.

14. Regarding claim 11, Hiji discloses a reflective display comprising an apparatus according to claim 1 (see figure 1). Claim 11 is therefore unpatentable.

15. Regarding claim 12, Hiji discloses a portable device comprising a reflective display according to claim 11 (see figure 1). Claim 12 is therefore unpatentable.

16. Regarding claim 13, Hiji discloses a portable device according to claim 12 (see figures 1 and 3, for instance), wherein said device is one of a mobile telephone, a portable computer, an electronic calendar, an electronic book, a television set or a video game control. Claim 13 is therefore unpatentable.

17. Regarding claim 14, Hiji discloses a method of providing varying brightness in an apparatus as defined in claim 1 (see figures 1 and 3, for instance), the method comprising the steps of: manipulating pixel elements (22, 24) in one of said first (51) and second (53) liquid crystal cells into their reflective state when a lower brightness is desired, and manipulating essentially superimposed pixel elements (22, 24) in both of said first (51) and second (53) liquid crystal cells into their reflective state when a higher brightness is desired. Claim 14 is therefore unpatentable.

18. Regarding claim 15, Hiji discloses a method of providing varying brightness in an apparatus as defined in claim 1 (see figures 1 and 3, for instance), said apparatus additionally comprising at least a third liquid crystal cell (55), said third cell comprising

third pixel elements (26), said elements being controllable between a non-reflective state, in which third electromagnetic radiation having a third polarization is reflected to a fifth extent, and a reflective state, in which said third electromagnetic radiation is reflected to a sixth extent (column 11, lines 2-16), said sixth extent being greater than said fifth extent, said method comprising the steps of: manipulating essentially superimposed pixel elements (22, 24, 26) in a number N of cells (51, 53, 55), N being equal to or greater than one but smaller than the total number of liquid crystal cells (51, 53, 55), into their reflective state when a lower brightness is desired, and manipulating essentially superimposed pixel elements (22, 24, 26) in a number N+1 of liquid crystal cells (51, 53, 55) into their reflective state when a higher brightness is desired. Claim 15 is therefore unpatentable.

19. Regarding claim 16, Hiji discloses a method of providing two images in a reflective display according to claim 11 (see figures 1 and 3, for instance), the method comprising the steps of: manipulating the first pixel elements (22) to reflect electromagnetic radiation in the shape of a first image, said first image consisting of electromagnetic radiation having a first polarization (right-handed), manipulating the second pixel elements (24) to reflect electromagnetic radiation in the shape of a second image, said second image consisting of electromagnetic radiation having a second polarization (left-handed). Claim 16 is therefore unpatentable.

20. Regarding claim 17, Hiji discloses a method according to claim 16 (see figures 1 and 3, for instance), wherein said apparatus in said reflective display additionally comprises at least a third liquid crystal cell (55), said third liquid crystal cell (55)

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comprising third pixel elements (26), said pixel elements (26) being controllable between a non-reflective state, in which third electromagnetic radiation having a third polarization is reflected to a fifth extent, and a reflective state, in which said third electromagnetic radiation is reflected to a sixth extent, said sixth extent being greater than said fifth extent (column 11, lines 2-16), said method comprising the step of: manipulating the third elements to reflect electromagnetic radiation in the shape of a third image, said third image consisting of electromagnetic radiation having a third polarization (right-handed). Claim 17 is therefore unpatentable.

21. Regarding claim 18, Hiji discloses a method according to claim 16 (see figures 1 and 3, for instance), wherein said method further comprises the steps of: providing at least two separate filter elements (43, 45), a first of said two filter elements (43) being capable of transmitting electromagnetic radiation having said first polarization and not transmitting electromagnetic radiation having said second polarization, and a second of said two filter elements (45) being capable of transmitting electromagnetic radiation having said second polarization and not transmitting electromagnetic radiation having said first polarization, arranging the first filter element (43) between the reflective display and any intended receiver of a first image, produced by the first pixel elements (26), and arranging the second filter element (45) between the reflective display and any intended receiver of a second image, produced by the second pixel elements (24). Claim 18 is therefore unpatentable.

22. Regarding claim 19, Hiji discloses a method according to claim 16 (see figures 1 and 3, for instance), wherein said method comprises the step of: arranging said first (51)

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and second (53) liquid crystal cells to transmit said first and second images in different directions. Claim 19 is therefore unpatentable.

23. Regarding claim 20, Hiji discloses a method according to claim 19 (see figures 1 and 3, for instance), wherein said first (51) and second (53) liquid crystal cells are arranged to transmit a first and a second image to a first and a second eye of an observer. Claim 20 is therefore unpatentable.

24. Regarding claim 21, Hiji discloses a method according to claim 18 (see figures 1 and 3, for instance), wherein the first (43) and second (45) filter elements are arranged in front of the left and the right eye, respectively, of an observer. Claim 21 is therefore unpatentable.

25. Regarding claim 22, Hiji discloses a method according to claim 19 for an apparatus according to claim 8 (see figures 1 and 3, for instance), wherein a first image and a second image are adapted to coincide with the left and the right eye of an observer. Claim 22 is therefore unpatentable.

26. Regarding claim 23, Hiji discloses a method according to any one of claim 16 (see figures 1 and 3, for instance), wherein said first and second images are identical. Claim 23 is therefore unpatentable.

27. Regarding claim 24, Hiji discloses a method according to any one of claim 20 (see figures 1 and 3, for instance), wherein said first and second images are perspective views creating a 3D sensation when observed. Claim 24 is therefore unpatentable.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathanael R. Briggs whose telephone number is (571) 272-8992. The examiner can normally be reached on 9 AM - 5:30 PM Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nathanael Briggs
3/12/2007


ANDREW SCHECHTER
PRIMARY EXAMINER